

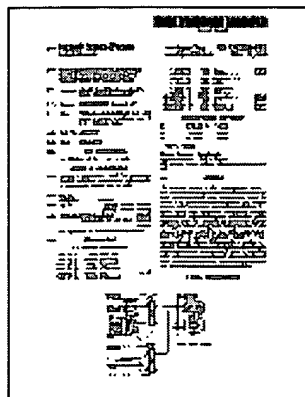
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Base station control equipment, mobile station equipment, and radio communication system

Atsushi Yamashita et al

Patent summary

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Abstract

The invention relates to a radio communication system, a base station control equipment and a mobile station equipment which constitute the radio communication system. An object of the present invention to maintain high channel capacity while adapting to geographical distribution of a mobile station which can perform soft hand-off. The base station control equipment comprises a transmission-quality measuring section for measuring the transmission qualities of reception waves arriving from mobile stations. In the process of channel control, the base station control equipment is given the allowable maximum number N of radio channels through which a BTS transmits in parallel, as a tolerable limit of interference with wireless zones formed by a local station and/or other stations. It allots, in descending order of the transmission qualities, N or less radio channels to the mobile stations which are transmitting ends of reception waves having measured transmission qualities.

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Claims

What is claimed is:

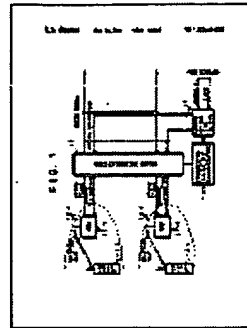
1. A radio communication system, comprising:

a single or a plurality of mobile station equipments which can be located in any of a plurality of wireless zones;
a plurality of BTSs individually forming the plurality of wireless zones; and
a base station controller being cooperative with said plurality of BTSs, for performing channel control of a call occurring in said single or plurality of mobile station equipments, the channel control including soft hand-off, and wherein
said single or plurality of mobile station equipments each includes:
a position measuring section for measuring a position of a mobile station; and
a notifying section being given an allowable maximum number n of radio channels used in parallel for the soft hand-off of the mobile station and base-station positions indicating positions of all or a part of said single or plurality of BTSs, and when identifying a state in which the mobile station is feasible of the soft hand-off, for notifying the state to the BTSs individually forming n or less wireless zones which are specified according to relative distances in ascending order of the relative distances between the measured position of the mobile station and the corresponding base-station positions; and
said base station controller includes:
a transmission-quality measuring section for measuring transmission qualities of reception waves arriving in the notified state from said single or plurality of mobile station equipments; and
a channel allotting section being given a maximum number N of radio channels through which the plurality of BTSs can transmit in parallel, for allotting N or less radio channels to mobile stations in descending order of the measured transmission qualities via a BTS as radio channels to be used for the soft hand-off, the mobile stations being transmitting ends of the reception waves with their transmission qualities measured.

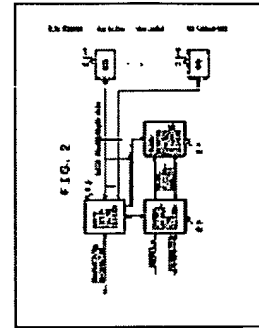
Yamashita, Akiko Tetsuka
Assignee: Fujitsu Limited
Primary Examiner:
 Joseph Feild
Secondary Examiner:
 Huy D. Nguyen
Attorney: Katten Muchin
 Rosenman LLP

**Current U.S.
 Classification**
 455/450; 455/442;
 455/436; 455/456.1;
 370/331; 370/332

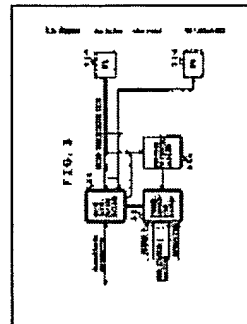
Drawings



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Citations

Patent Number	Title	Issue date
5926763	Cellular communication system with voice channel usage biasing	Jul 20, 1999
5974318	Method and system for increasing capacity and improving performance of a cellular network	Oct 26, 1999
6192246	Method and system for increasing capacity and improving performance of a cellular network	Feb 20, 2001
6240275	System and method for channel assignment based upon interference and channel quality measurements	May 29, 2001
6321089	Reverse link soft hand off	Nov 20, 2001

	method	
<u>6442151</u>	System and method for variable reassignment of transmission channels	Aug 27, 2002
<u>6590879</u>	Method, mobile station, basestation and mobile communications system for performing handoff independently for groups of physical direct sequence-code division multiple access channels	Jul 8, 2003
<u>6597673</u>	CDMA soft handoff control method	Jul 22, 2003
<u>6754191</u>	Method and apparatus for supplemental channel soft hand off in CDMA systems	Jun 22, 2004
<u>6754493</u>	Method and systems for dynamic threshold adjustment for handoffs in radio communication systems	Jun 22, 2004
<u>6782261</u>	Wireless handoff management method and device	Aug 24, 2004
<u>6816472</u>	Method and apparatus for selecting a best link for supplemental channel assignment during a handoff period in a spread	Nov 9, 2004

spectrum
communication
system

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